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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
BELLAMY, TAMIKO D	

ART UNIT	PAPER NUMBER
2856	

DATE MAILED: 12/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/580,313	IMHOFF, PAUL T.	
	Examiner	Art Unit	
	Tamiko D. Bellamy	2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 2 is objected to because of the following informalities:

   a. Line 1, delete ".", before the word difluoromethane.

   Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The words "each of said conservative tracers" are vague and unclear. It is unclear as whether plural conservative tracers are claims. Line 1, 6, claims one of the two gas tracers is a conservative tracer.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3, 6, 7, 11, 14, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Briening M. et al., "Partitioning Gas Tracer Technology for Measuring Water in Landfills", (2002) Fall Meeting of the American Geophysical Union, B51A-708.

Re claim 1, Briening M. et al. disclose measuring water within solid waste by injecting two gas tracers within the solid waste. Briening M. et al. discloses one gas is conservative (e.g., non-reactive), and the second gas tracer partitions into the water and is separated from the conservative tracer during at least a portion of the method (See article B51A-0708).

Re claim 3, Briening M. et al. disclose tracers that are injected and chromatographic separation of the tracers is measured between the point of the tracer injection and a point of tracer extraction (See article B51A-0708).

Re claim 6, Briening M. et al. disclose a conservative (e.g., non-reactive) tracer. The conservative tracer has the inherent function of having a low affinity for water, and has a negligible affinity for solid waste and a gas-water phase interface.

Re claim 7, Briening M. et al. disclose a conservative (e.g., non-reactive) tracer, and a partitioning tracer (See article B51A-0708).

Re claim 11, Briening M. et al. disclose the partitioning tracer employed has a retardation dominated by bulk water (See article B51A-0708).

Re claim 14, Briening M. et al. disclose one tracer is conservative (e.g., non-reactive) within the landfills, and the second gas tracer partitions into the water (See article B51A-0708). Briening M. et al. disclose a conservative tracer, which has an inherent function of not partitioning significantly into solids/liquids. Briening M. et al.

discloses a partition tracer which has the inherent function of partitioning into water in landfills, but has minimal affinity for gas-water phase interface for solid waste.

Re claim 17, Briening M. et al. disclose a conservative (e.g., non-reactive) tracer. The conservative tracer has the inherent function of having a low affinity for water, and has a negligible affinity for solid waste and a gas-water phase interface.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 2, 4, 5, 8-10, 12, 13, 15, 16, and 18, rejected under 35 U.S.C. 103(a) as being unpatentable over Briening M. et al., "Partitioning Gas Tracer Technology for Measuring Water in Landfills", (2002) Fall Meeting of the American Geophysical Union, B51A-708.

Re claim 2, Briening M. et al. disclose a conservative (e.g., non-reactive) tracer, and a partitioning tracer (See article B51A-0708). While Briening M. et al. discloses does not specifically discloses that the tracers comprise helium and difluoromethane, the court held in In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960), that the selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art. Therefore, to employ Briening M. et al on a tracers comprising helium and difluoromethane would have been obvious to one of ordinary skill in the art at the time of the invention since this reference explicitly teaches using two tracers.

Re claim 4, Briening M. et al. disclose a conservative (e.g., non-reactive) tracer (See article B51A-0708). While Briening M. et al. discloses does not specifically discloses that the conservative tracer comprises at least one noble gas or perfluorinated compound, the court held in In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960), that the selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art. Therefore, to employ Briening M. et al on a conservation tracer comprising noble gas or perfluorinated compound would have been obvious to one of ordinary skill in the art at the time of the invention since this reference explicitly teaches using a conservative tracer.

Re claim 5, Briening M. et al. disclose a conservative (e.g., non-reactive) tracer (See article B51A-0708). While Briening M. et al. discloses does not specifically discloses a conservative tracer selected from the group consisting of neon, helium, argon, and perfluorinated compounds, the court held in In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960), that the selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art. Therefore, to employ Briening M. et al. on a conservation tracer selected from the group of neon, helium, argon, and perfluorinated compounds would have been obvious to one of ordinary skill in the art at the time of the invention since this reference explicitly teaches using a conservative tracer.

Re claim 8, Briening M. et al. disclose a conservative (e.g., non-reactive) tracer, and a partitioning tracer (See article B51A-0708). While Briening M. et al. disclose does not specifically discloses that the tracers are nontoxic, nonbiodegradable, and detectable

within the gas phase, the court held in In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960), that the selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art. Therefore, to employ Briening M. et al. on tracers that are nontoxic, nonbiodegradable, and detectable within the gas phase would have been obvious to one of ordinary skill in the art at the time of the invention since this reference explicitly teaches using two tracers used in an and environment for biodegradation or organic wastes.

Re claim 9, Briening M. et al. disclose injecting two gas tracers into a landfill. While Briening M. et al. does not specifically disclose that the tracers are absent from the landfill gas or found in negligible concentrations within the gas phase. However, this teaching infers and/or suggests adding tracers wherein the current landfill gas does not contain a significant amount of the applied tracers that would alter the existing conditions of the landfill gas prior to adding the tracers. Therefore, to employ Briening M. et al. on tracers that are absent from landfill gas or found at negligible concentration would have been obvious to one of ordinary skill in the art at the time of the invention since this reference explicitly teaches using two tracers that are injected into the landfill.

Re claim 10, Briening M. et al. disclose a partitioning tracer (See article B51A-0708). While Briening M. et al. discloses does not specifically discloses that the partitioning tracer comprises at least one of a halogenated aliphatic compounds, weakly acidic and basic gases, and a polar organic compound, the court held in In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960), that the selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art.

Therefore, to employ Briening M. et al on a partitioning tracer from the selected group would have been obvious to one of ordinary skill in the art at the time of the invention since this reference explicitly teaches using a partitioning tracer.

Re claims 12 and 13, Briening M. et al. disclose measuring water within solid waste by injecting two gas tracers within the solid waste/landfills. Briening M. et al. discloses one gas is conservative (e.g., non-reactive), and the second gas tracer partitions into the water and is separated from the conservative tracer during at least a portion of the method (See article B51A-0708). While Briening M. et al. does not specifically discloses that the measuring water in a biofilter, the court held in, In re Pearson, 494 F.2d 1399, 181 USPQ 641 (CCPA 1974); In re Yanush, 477 F.2d 958, 177 USPQ 705 (CCPA 1973); In re Finsterwalder, 436 F.2d 1028, 168 USPQ 530 (CCPA 1971); In re Casey, 370 F.2d 576, 152 USPQ 235 (CCPA 1967); In re Otto, 312 F.2d 937, 136 USPQ 458 (CCPA 1963); Ex parte Masham, 2 USPQ2d 1647 (BdPatApp & Inter 1987), that a recitation with respect to the manner in which an apparatus is intended to be employed does not impose any structural limitation upon the claimed apparatus which differentiates it from a prior art reference disclosing the structural limitations of the claim. Therefore, to employ Briening M. et al on measuring water in a biofilter would have been obvious to one of ordinary skill in the art at the time of the invention since this reference explicitly teaches determining the amount of water in solid waste/landfills.

Re claim 15, Briening M. et al. disclose a conservative (e.g., non-reactive) tracer, and a partitioning tracer (See article B51A-0708). While Briening M. et al. disclose does not specifically discloses that the tracers are nontoxic, nonbiodegradable, and detectable

within the gas phase, the court held in In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960), that the selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art. Therefore, to employ Briening M. et al. on tracers that are nontoxic, nonbiodegradable, and detectable within the gas phase would have been obvious to one of ordinary skill in the art at the time of the invention since this reference explicitly teaches using two tracers used in an and environment for biodegradation or organic wastes.

Re claim 16, Briening M. et al. disclose a conservative (e.g., non-reactive) tracer (See article B51A-0708). While Briening M. et al. discloses does not specifically discloses that the conservative tracer comprises at least one noble gas or perfluorinated compound, the court held in In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960), that the selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art. Therefore, to employ Briening M. et al on a conservation tracer comprising noble gas or perfluorinated compound would have been obvious to one of ordinary skill in the art at the time of the invention since this reference explicitly teaches using a conservative tracer.

Re claim 18, Briening M. et al. disclose a partitioning tracer (See article B51A-0708). While Briening M. et al. discloses does not specifically discloses that the partitioning tracer comprises at least one of a halogenated aliphatic compounds, weakly acidic and basic gases, and a polar organic compound, the court held in In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960), that the selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art.

Therefore, to employ Briening M. et al on a partitioning tracer from the selected group would have been obvious to one of ordinary skill in the art at the time of the invention since this reference explicitly teaches using a partitioning tracer.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamiko D. Bellamy whose telephone number is (571) 272-2190. The examiner can normally be reached on Monday - Friday 7:30 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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July 27, 2006

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